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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,637	06/15/2006	Konstantinos Chondroudīs	SMX 2022.2 (2003-037 (PCT	7262
45735	7590	03/13/2009	EXAMINER	
SENNIGER POWERS LLP (SMX) 100 NORTH BROADWAY 17TH FLOOR ST. LOUIS, MO 63102			HAILEY, PATRICIA L	
			ART UNIT	PAPER NUMBER
			1793	
			NOTIFICATION DATE	DELIVERY MODE
			03/13/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

Office Action Summary	Application No. 10/559,637	Applicant(s) CHONDROUDIS ET AL.	
	Examiner PATRICIA L. HAILEY	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,9-14,19,43-49,54,59 and 64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11 is/are allowed.
- 6) ☒ Claim(s) 3,12-14,19,43-49,54,59 and 64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Applicants' remarks and amendments, filed on December 2, 2008, have been carefully considered. Claims 1, 2, 4-8, 16-18, 39-42, 50-53, 55-58, and 60-63 have been canceled; no new claims have been added.

Claims 3, 9-14, 19, 43-49, 54, 59, and 64 remain pending in this application.

Withdrawn Rejections

The 102(b) rejection of claims 1, 2, 4-8, 16-18, 39-42, 50-53, and 60-63 as being anticipated by Acres et al. (U. S. Patent No. 3,915,898) stated in the previous Office Action has been withdrawn in view of Applicants' persuasive arguments traversing this rejection, and in view of Applicants' cancellation of claims 1, 2, 4-8, 16-18, 39-42, 50-53, 55-58, and 60-63.

New Ground of Rejection

The following New Ground of Rejection is being made in view of Applicants' cancellation of claim 6.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. ***Claims 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.***

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Claims 12-14 are indefinite because claim 12 depends from claim 6, which has been canceled.

Withdrawal of Allowable Subject Matter

3. The indicated allowability of claims 3, 19, 43-49, 54, 59, and 64 is withdrawn in view of the newly discovered reference(s) to Schmidt (U. S. Patent No. 6,309,758) and Narayan et al. (U. S. Patent No. 4,717,774). Rejections based on the newly cited reference(s) follow.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

4. ***Claims 3 and 44-48 are rejected under 35 U.S.C. 102(b) as being anticipated by to Schmidt (U. S. Patent No. 6,309,758).***

Schmidt teaches a novel precious metal doped porous metal catalyst (Abstract), based on a base metal, such as nickel, or a mixture of base metals (e.g., copper, see col. 3, lines 43-45), in amounts of at least about 85 wt. percent, and which has a minor amount (up to about 15 wt. percent) of other metals such as chromium. See col. 5, lines 4-15 of Schmidt., as well as col. 8, lines 45-58.

Examples of the precious metal dopant include platinum (col. 6, lines 1-4), which is present in the porous metal catalyst in amounts ranging from about 0.01 to 1.5 % by

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weight based on the weight of the porous base metal catalyst. See col. 6, lines 17-20 of Schmidt.

The porous metal catalyst may also contain dopant metals such as chromium, in amounts up to 3 weight percent. See col. 6, lines 25-34 of Schmidt.

The aforementioned weight percentages convert to atomic percentages that fall within the limitations of claims 3 and 44-48. Additionally, the limitation "for use in oxidation or reduction reactions" is a statement of intended use, and is not given patentable weight.

In view of the above teachings, Schmidt anticipates claims 3 and 44-48.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 19, 43, 49, 54, 59, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over to Schmidt (U. S. Patent No. 6,309,758) in view of Narayan et al. (U. S. Patent No. 4,717,774) and Capuano et al. (U. S. Patent No. 5,126,216, Applicants' previous submitted art).

Schmidt is relied upon for its teachings with respect to **claims 3 and 44-48** as stated in the above 102(b) rejection; the teachings therein are further considered to read upon **claims 19, 43, 54, 59, and 64**. Although Schmidt teaches a catalyst containing components reading upon that instantly claimed, the reference does not teach or suggest a supported electrocatalyst. Rather, Schmidt teaches a catalyst useful for the hydrogenation of compounds such as dinitrotoluene (col. 9, lines 20-63).

Narayan et al. teach that it is known in the art of hydrogenating dinitrotoluene to employ known catalysts, such as those comprising nickel and copper, for said

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hydrogenating in either supported or unsupported form. See col. 3, lines 5-20 of Narayan et al.

Motivated by the teachings of Narayan et al., the skilled artisan would be motivated to modify the teachings of Schmidt by supporting Patentee's catalyst on a carrier.

Capuano et al. is relied upon for its teachings regarding an electrocatalyst made of a noble metal chromium-copper alloy supported on an electrically conductive material (e.g., carbon, see col. 2, lines 40-46), said electrocatalyst having a mass activity for oxygen reduction. See col. 2, lines 21-26 of Capuano et al.

Because Schmidt teaches catalysts containing components comparable to that disclosed in Capuano et al., the skilled artisan would find reasonable expectation that the catalyst of Schmidt would suitably function as an electrocatalyst, absent the showing of convincing evidence to the contrary.

Allowable Subject Matter

9. Claims 9-11 are allowed.

10. Claims 12-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PATRICIA L. HAILEY whose telephone number is (571)272-1369. The examiner can normally be reached on Mondays-Fridays, from 7:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/PATRICIA L. HAILEY/

Examiner, Art Unit 1793

March 6, 2009